

# Case Study: The Impact of Distance Learning on U.S. Navy Voluntary Education

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## Research & Evaluation Team

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## Introduction

The U.S. Navy offers a voluntary education benefit, Tuition Assistance (TA), which allows active duty personnel to take college courses in either traditional (classroom) or distance learning (DL) format. The advantage for servicemembers is clear: the opportunity to engage in a higher education program (up to Master's level) at reduced personal expense. However, the payoff for the Navy is less obvious. University course content is generally not directly applicable to Sailors' work. Additionally, once qualified, their value on the open job market is higher, providing greater incentive for them to pursue opportunities outside of the military. This could be expected to result in lower retention rates, unless it is offset by improved promotion opportunities within the Navy. This case study examines these suppositions, and is based on research by Scott Woosley (2009) of the Naval Postgraduate School.

Woosley analyzed educational and manpower records for nine enlistee cohorts from 1994 to 2008, finding that the growth of DL over this period led to a doubling in overall TA participation rates. Certain groups—specifically junior non-commissioned officers (NCOs) who were married or had dependents—were more likely to take advantage of DL than traditional courses. In either case, TA participation was associated with modest increases in contract extension/re-enlistment and merit-based promotion.

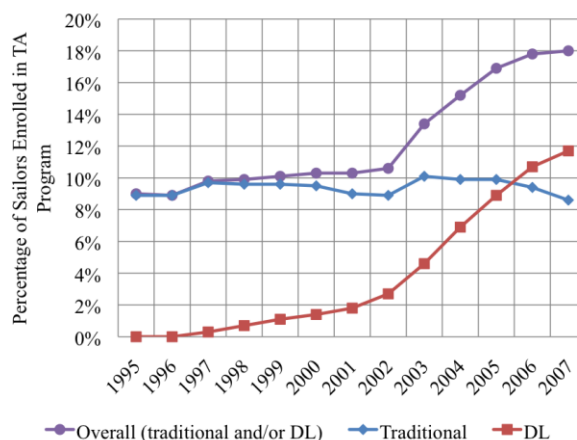
## Program Growth

Although the Tuition Assistance (TA) program covers associate, undergraduate and Master's level courses, Woosley limited his analyses to enlistees who were enrolled in undergraduate courses, as this group contained the majority of the TA participants. In this group, participation in the TA program has grown consistently from 9% of eligible Sailors in 1995 to 18% in 2007 (Woosley, 2009).

As shown in Figure 1, this growth was fueled by heightened participation in DL courses. With traditional instruction, Sailors are limited to courses offered by closely located colleges and universities. This presents an obstacle for many Sailors to be able to complete their education if they are relocated or deployed. Indeed, in

survey by Mehay and Pema (2007), 83% of servicemembers reported that voluntary education was “not easy to schedule.” Given these constraints, it is not surprising that DL (which can be taken anytime and anywhere) has experienced rapid growth. DL was virtually unused when the TA program began in 1994, but by 2007, 12% of all enlisted Sailors were enrolled in DL courses—surpassing the enrollment in traditional classes.

**Figure 1. Participation in U.S. Navy Tuition Assistance Program (Woosley, 2009)**

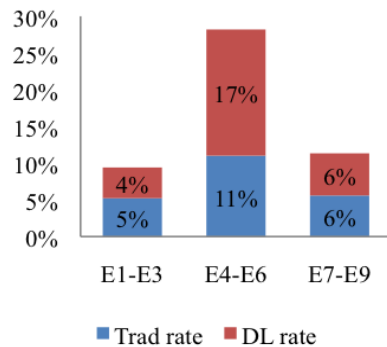


## Participant Demographics

The flexible nature of DL is particularly beneficial for working parents. Indeed, Woosley found that Sailors who have dependents were 11% more likely to choose DL over traditional instruction. Similarly, those who were married were 13% more likely to take DL courses.

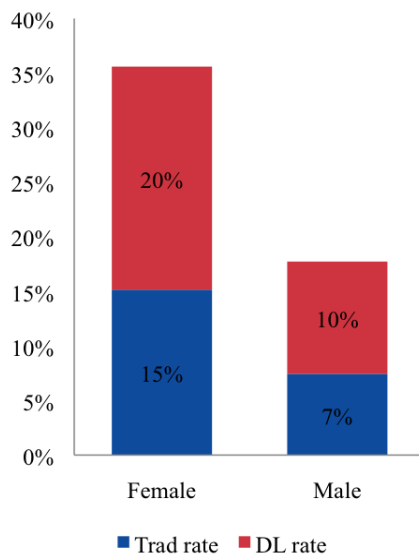
Also notable is the difference in TA participation across ratings. In 2007, only 4% of Sailors in rates E1-3 took a DL course, compared to 17% of those in rates E4-6 (see Figure 2). This suggests that the Sailors taking advantage of TA are predominantly those who are serious about their Navy careers and face competitive pressure for promotion (at lower rates promotion is based on time served). Those in the highest NCO rates (E7-E9) had lower participation rates, most likely because the majority of Sailors at this point in their career already have an undergraduate degree.

**Figure 2. 2007 Participation in U.S. Navy Tuition Assistance Program by rating (Woosley, 2009)**



Analysis of the gender of participants indicated that females were almost twice as likely to use TA as males (see Figure 3). Woosley suggests that this may be due to the relatively smaller range of career opportunities available to women in the Navy at the time. Few significant differences were found between participation rates of minority and Caucasian Sailors. One exception was Hispanics, who were 32% more likely to participate in DL courses than Caucasians (the difference was +10% for traditional courses).

**Figure 3. Participation in U.S. Navy Tuition Assistance Program by gender (Woosley, 2009)**



## Costs

In FY'06, the Navy's Tuition Assistance program cost \$95 million. Participants can take up to 16 credit hours per year, at a cost of up to \$250 per semester hour, with an annual fee reimbursement cap of \$4,000 (Barker, 2009). The Army also offers Tuition Assistance, via the eArmyU website, as does the Air Force—both are

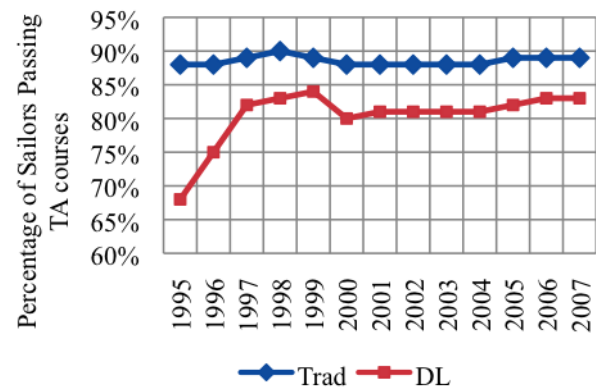
capped at \$4,500 per year (GoArmyEd, n.d.; military.com, n.d.)

Undergraduate tuition rates vary dramatically across universities, often exceeding the per-hour cap. For 2009, average fees at public four-year colleges were \$234 and \$618 per credit hour for resident and non-resident students, respectively. Private university fees were even higher, averaging \$891 per credit hour (College Board, 2009). Sailors must make up the difference themselves, although many universities offer financial aid or military discounts to reduce students' out-of-pocket expenses. Fees are typically the same for both traditional and DL courses.

## Pass rates

As the TA program does not cover the costs of incomplete or failed courses, Sailors have a strong incentive to pass their courses. However, as Figure 4 indicates, the pass rates for DL courses have consistently remained 5 to 10 percentage points lower than those for classroom instruction (82% vs. 88% in 2007). This may be because DL demands are at least as rigorous as those in traditional classes, and Sailors may underestimate the time and work commitment required to successfully complete them.

**Figure 4. Course pass rates (Woosley, 2009)**



## Promotion

If better-qualified Sailors are more valued by the Navy, then participation in the TA program should lead to more rapid promotion. To ensure a fair comparison, Woosley's study only compared promotion rates for Sailors in their first contract term, and excluded those who left the service without completing three years of service. Of this group, TA participants were more likely to be promoted to E4 (Petty Officer third class) and to E5 (Petty Officer second class). The increment ranged from 4% (promotion to E4, regardless of TA modality) to 29% (promotion to E5, for DL participants only). Promotion to other rates could not be compared as advancement to E2 and E3 is awarded automatically (based on duration of service) and the sample size reaching E6 or above was too small to analyze. In conclusion, it is reasonable to

assume that pursuing an undergraduate degree leads to better promotion prospects.

### Re-enlistment and Contract Extension

The TA program could have both positive and negative effects on re-enlistment and contract extension rates. As a benefit, the TA program can incentivize Sailors to increase their value to the Navy. However, more educated servicemembers may also be attractive to non-military employers. Based on Woosley's analyses, these effects seemed to cancel each other out; TA participants were only 2% more likely to re-enlist or extend their contracts, compared to Sailors who did not participate in the program.

### Conclusion

The TA program has been popular within the Navy, with 18% of eligible enlistees participating in 2007 (Woosley, 2009). The increased use of DL has powered this growth, and more servicemembers are choosing to enroll in DL courses than in traditional instruction. Although DL is associated with a slightly lower pass rate, its net contribution is positive, improving Sailors' promotion prospects and increasing re-enlistment and contract extension rates. Therefore, it is expected that DL use will continue to grow in the coming years, especially as colleges and universities expand their online offerings.

### References

- Barker, E. (2009). Post-9/11 GI Bill benefits available to Navy members. Retrieved November 6, 2009 from [http://www.navy.mil/search/display.asp?story\\_id=46640](http://www.navy.mil/search/display.asp?story_id=46640)
- College Board. (2009). Trends in college pricing. Retrieved November 6, 2009 from [http://www.trends-collegeboard.com/college\\_pricing/pdf/2009\\_Trends\\_College\\_Pricing.pdf](http://www.trends-collegeboard.com/college_pricing/pdf/2009_Trends_College_Pricing.pdf)
- GoArmyEd. (n.d.). Tuition Assistance (TA) policies. Retrieved November 6, 2009 from [https://www.goarmyed.com/public/public\\_tuition\\_assistance\\_policies.aspx](https://www.goarmyed.com/public/public_tuition_assistance_policies.aspx)
- Mehay, S., & Pema, E. (2009). *The effect of employer-sponsored general education on turnover and productivity: New evidence from Military Tuition Assistance programs*. Monterey, CA: Naval Postgraduate School, Graduate School of Business and Public Policy. Retrieved November 6, 2009 from <http://client.norc.org/jole/SOLEweb/9328.pdf>
- Military.com. (n.d.). Air Force tuition assistance. Retrieved November 6, 2009 from <http://www.military.com/money-for-school/tuition-assistance/air-force-tuition-assistance>
- Woosley, S. (2009). *Does the method of instruction affect the performance of Sailors in the Tuition Assistance program?* Unpublished master's thesis, Naval Postgraduate School, Monterey, California.

